

What is claimed is:

1    1.    Apparatus comprising:  
2            a first acquisition element which acquires from another device a first  
3 identification signal output at a first terminal of the other device;  
4            a second acquisition element which acquires from the other device a second  
5 identification signal output at said first terminal in a state in which a first modification  
6 signal directing change to the signal output at said first terminal is output to a  
7 second terminal of the other device; and  
8            an identification information determining element which determines  
9 information identifying the other device based on the acquired first and second  
10 identification signals.

1    2.    Apparatus according to Claim 1 wherein said first acquisition element further  
2 acquires a third identification signal output at said second terminal; said second  
3 acquisition element acquires said second identification signal output from said first  
4 terminal in a state in which said second acquisition portion has output said first  
5 modification signal to have a value different from the value of said third identification  
6 signal; and said identification information determining element determines said  
7 identification information on the basis of the acquired first, second and third  
8 identification signals.

1    3.    Apparatus according to Claim 2 wherein said second acquisition element  
2 outputs said first modification signal to said second terminal to acquire said second  
3 identification signal in a state in which said first identification signal and the third  
4 identification signal have the same value.

1    4.    Apparatus according to Claim 2, wherein said second acquisition element  
2 outputs said first modification signal to said second terminal to acquire said second  
3 identification signal in a state in which the value of said first identification signal is

4 the logical negation of the value of said third identification signal.

1 5. Apparatus according to Claim 2, wherein: said first acquisition element  
2 acquires said first signal output from said first terminal and a plurality of said third  
3 identification signals output from a plurality of said second terminals; said second  
4 acquisition element performs a logical operation on the signal values of said plurality  
5 of second terminals to acquire said second identification signal output at said first  
6 terminal in a state in which said second acquisition element has output said first  
7 modification signal having a value different from the value of said third identification  
8 signal output from at least one or some of said second terminals to said at least one  
9 or some of plurality of second terminals; and said identification information  
10 determination element identifies the type of said logic operation on the basis of  
11 correspondences between the signal values of said plurality of second terminals  
12 and said second identification signal and determines said identification information  
13 on the basis of said first identification signal, said plurality of third signal, and the  
14 type of said logical operation.

1 6. Apparatus according to Claim 2, wherein said second acquisition element  
2 further acquires a fourth identification signal output from said second terminal in a  
3 state where a second modification signal having a value different from the value of  
4 said first identification signal is output at said first terminal; and said identification  
5 information determination element determines said first, second, third, and fourth  
6 identification signals.

1 7. Apparatus according to Claim 2, further comprising a selecting element for  
2 selecting a plurality of terminals of said external device one by one as said second  
3 terminal, and further wherein: said second acquisition element acquires said second  
4 identification signal output from said first terminal different from one of said second  
5 terminals selected by said selecting element in a state in which said second  
6 acquisition element has output said first modification signal associated with said

7 selected second terminal to said selected second terminal; and said identification  
8 information determination element determines said identification information on the  
9 basis of said first identification signal, a plurality of said second identification signals  
10 input by said second acquisition correspondingly to said second terminals selected  
11 by said selecting element, and said third identification signal.

1 8. Apparatus according to Claim 7, wherein said selecting element  
2 selects the frequently appearing signal value that is output from the  
3 largest number of terminals among the signal values of a plurality of  
4 identification signals including said first identification signal or said third  
5 identification signal output from said plurality of terminals,  
6 selects as the second terminal from among said plurality of terminals  
7 the terminals one by one that output said frequently appearing signal value  
8 of an identification signal, and  
9 causes said second acquisition element to acquire said second  
10 identification signal against each of said selected second terminals.

1 9. Apparatus comprising:  
2 a first terminal at which a first identification signal which forms a part of  
3 device identification information is output;  
4 a second terminal at which a first change signal is received which directs a  
5 change in the output from said first terminal; and  
6 an output setting circuit operatively connected with said first and second  
7 terminals and directing that a second identification signal which forms a part of the  
8 device identification information be output from said first terminal in a state in which  
9 said first change signal has been input to said second terminal.

1 10. Apparatus according to Claim 9, wherein: said second terminal outputs a  
2 third identification signal forming a part of the device identification information; and  
3 said output setting circuit causes said second identification signal to be output from

4 said first terminal in a state in which said first change signal having a value different  
5 from the signal value of said third identification signal has been input through said  
6 second terminal.

1 11. Apparatus according to Claim 10, wherein: said output setting circuit inputs  
2 the signal value of said second terminal, and, in a state in which said second  
3 terminal has the signal value of said third identification signal, outputs said first  
4 identification signal to said first terminal, and, in a state in which said second  
5 terminal has the signal value of said first change signal, outputs said second  
6 identification signal to said first terminal.

1 12. Apparatus according to Claim 10, wherein said output setting circuit has  
2 wiring for providing electrical connection between said first and second terminals.

1 13. Apparatus according to Claim 12, further comprising a pull-down portion for  
2 said second terminal pulled up by a first resistor, and pulling down said second  
3 terminal by a second resistor having a value lower than that of said first resistor.

1 14. Apparatus according to Claim 10, wherein said output setting circuit outputs  
2 the logical negation value of the signal value of said second terminal to said first  
3 terminal.

1 15. Apparatus according to Claim 10, wherein said output setting circuit has a  
2 combinational logic circuit for outputting the result of a logical operation on the  
3 signal values of plurality of said second terminals to said first terminal.

1 16. Apparatus according to Claim 10, wherein said output setting circuit has an  
2 open-collector logic output or open-drain logic output for outputting said first or  
3 second identification signal to said first terminal.

1 17. Apparatus according to Claim 10, wherein said output setting circuit has a  
2 rectifier for preventing backflow of a current from said first terminal to said second  
3 terminal.

1 18. Apparatus according to Claim 9, further comprising a third terminal  
2 connected to a predetermined potential for outputting said predetermined potential  
3 as at least part of said first identification signal forming a part of said identification  
4 information.

1 19. An identification system having an identification information output apparatus  
2 for outputting preset identification information and an identification information  
3 acquisition apparatus for acquiring said identification information, wherein,  
4 said identification information output apparatus comprises:

5 a first terminal for outputting a first identification signal forming a part  
6 of said identification information;

7 a second terminal through which a first change signal for instructing  
8 to change a signal output from said first terminal is input; and

9 an output setting circuit for causing a second identification signal  
10 forming a part of said identification information to be output from said first  
11 terminal in a state in which said first change signal has been input to said  
12 second terminal, and

13 said identification information acquisition apparatus comprises:

14 a first acquisition portion for acquiring said first identification signal  
15 output from said first terminal;

16 a second acquisition portion for acquiring said second identification  
17 signal output from said first terminal in a state in which said first change  
18 signal has been output to said second terminal; and

19 an identification information determination portion for determining said  
20 identification information on the basis of said first and second identification  
21 signal.

1 20. An method for acquiring identification information configured for an external  
2 device, comprising:  
3 acquiring a first identification signal output by a first terminal of said external  
4 device;  
5 acquiring a second identification signal output by said first terminal in a state  
6 in which a first modification signal directing change to the signal output by said first  
7 terminal is output to a second terminal of said external device; and  
8 determining said identification information based on said first identification  
9 signal and said second identification signal.

1 21. A recording medium on which a program used for an identification  
2 information acquisition apparatus for acquiring identification information set in an  
3 external device, said program causing said identification information acquisition  
4 apparatus to function as:  
5 a first acquisition portion for acquiring a first identification signal output from  
6 a first terminal of said external device;  
7 a second acquisition portion for acquiring a second identification signal  
8 output from said first terminal in a state in which a first change signal for instructing  
9 to change a signal output from said first terminal has been output to a second  
10 terminal of said external device; and  
11 an identification information determination portion for determining said  
12 identification information on the basis of said first and second identification signal.

1 22. A program for an identification information acquisition apparatus for acquiring  
2 identification information set in an external device, said program causing said  
3 identification information acquisition apparatus to function as:  
4 a first acquisition portion for acquiring a first identification signal output from  
5 a first terminal of said external device;  
6 a second acquisition portion for acquiring a second identification signal

7 output from said first terminal in a state in which a first change signal for instructing  
8 to change a signal output from said first terminal has been output to a second  
9 terminal of said external device; and  
10 an identification information determination portion for determining said  
11 identification information on the basis of said first and second identification signals.